

## Atmospheric conditions during solar radiation measurements, Blue Hill Observatory of Harvard University

Date and time from apparent noon	Air temperature	Wind (Beaufort scale)	Visibility; scale, 0-10	Sky blue-ness	Cloudiness and remarks
<b>September 1934</b>					
1; 2:54 a. m.	17.8	SE 3	9, se, 6 sw	4	Few Cu, 1 Cl.
1; 3:40 p. m.	17.7	ESE 4	8-9	6	4 Cl.
11; 1:57 a. m.	19.4	WNW 2		4	4 Acu, 1 Cu.
11; 1:58 a. m.	20.6	NW 3	8	5	Few Acu, 6 Cu.
13; 3:01 p. m.	15.4	NE 4		8	5 Cl, few Acu, few Stcu.
13; 4:19 p. m.	14.9	ENE 3		7	5 Cl, 3 Cu, few Stcu.
25; 1:56 a. m.	19.3	NE 3		7	Few Cl, few Stcu, 1 Cu.
25; 0:56 p. m.	21.0	NNE 1		6	Few Cl, few Cu. (Cl'ds interrupted radiation meas'ts.)
25; 4:00 p. m.	19.8	NE 1	8+	7	Few Cl, few Cu.
26; 4:04 a. m.	18.3	S 2	7	8	Clear, with fog on horizon.
26; 2:37 p. m.	26.1	S 2	8	6	Few Cu.
26; 4:14 p. m.	25.0	SxW 3		6	Few Cl, few Cu.
26; 0:22 a. m.	23.9	S 2		6	Few Cu.
28; 4:00 a. m.	12.2	WNW 2	4, n, 6, w	6	Few Clst, lt. hz, Smk over Boston.
28; 2:00 a. m.	13.9	WNW 2	8 sw, 7 e	6-7	Smk to 5° over Boston.
28; 2:09 p. m.	18.3	WSW 2	7	6	Few Acu, sse horizon.
28; 4:12 p. m.	19.4	WSW 2		5	1 Acu & Cu, west horizon.

## POSITIONS AND AREAS OF SUN SPOTS

[Communicated by Capt. J. F. Hellweg, U. S. Navy, Superintendent U. S. Naval Observatory. Data furnished by the U. S. Naval Observatory in cooperation with Harvard and Mount Wilson Observatories. The difference in longitude is measured from the central meridian, positive west. The north latitude is positive. Areas are corrected for foreshortening and are expressed in millionths of the sun's visible hemisphere. The total area for each day includes spots and groups]

Date	Eastern stand- ard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longi- tude	Longi- tude	Latitu- de	Spot	Group		
1934								
	<i>h m</i>	<i>°</i>	<i>°</i>	<i>°</i>				
Sept. 1	11 22		No spots					U. S. Naval.
Sept. 2	10 34		No spots					Do.
Sept. 3	11 0		No spots					Mount Wilson.
Sept. 4	13 18		No spots					U. S. Naval.
Sept. 5	13 29		No spots					Do.
Sept. 6			No spots					Harvard.
Sept. 7	9 0		No spots					Mount Wilson.
Sept. 8	9 30		No spots					Do.
Sept. 9			No spots					Harvard.
Sept. 10	13 8		No spots					U. S. Naval.
Sept. 11	13 11		No spots					Do.
Sept. 12	11 40	-1.0	173.8	-30.0		9	9	Mount Wilson.
Sept. 13			No spots					Harvard.
Sept. 14	11 45	+25.0	173.4	-30.0		27		Mount Wilson.
		+50.0	198.4	+7.0		8	35	
Sept. 15	12 18	+62.0	196.9	+7.0	46		46	U. S. Naval.
Sept. 16	12 25	+77.0	198.6	+7.0		115	115	Mount Wilson.
Sept. 17	11 14		No spots					U. S. Naval.

## POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	Eastern stand- ard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longitude	Longitude	Latitude	Spot	Group		
1934		°	°	°				
Sept. 18.....	h m		No spots					U. S. Naval.
Sept. 19.....	11 26		No spots					Do.
Sept. 20.....	11 30		No spots					Do.
Sept. 21.....	11 16		No spots					Mount Wilson.
Sept. 22.....	9 15		No spots					U. S. Naval.
Sept. 23.....	11 43		No spots					Do.
Sept. 24.....	12 37		No spots					Do.
Sept. 25.....	12 41		No spots					Do.
Sept. 26.....	14 29		No spots					Do.
Sept. 27.....	11 8		No spots					Do.
Sept. 28.....	11 49		No spots					Do.
Sept. 29.....	11 39	+7.0	330.7	+23.0	31		31	Do.
	13 0	-66.0	243.8	-12.0		6		Mount Wilson.
		+7.0	316.8	-2.5		4		
		+21.0	330.8	+22.0		8		
		+50.0	359.8	-29.0		6	24	
Sept. 30.....	11 30	+34.0	331.4	+23.0		62	62	U. S. Naval.
Mean daily area for 30 days.....							11	

## PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR SEPTEMBER 1934

(Dependent alone on observations at Zurich and its station at Arosa)

[Data furnished through the courtesy of Prof. W. Brunner, Eidgen. Sternwarte, Zurich, Switzerland]

September 1934	Relative numbers	September 1934	Relative numbers	September 1934	Relative numbers
1	0	11	0	21	0
2	0	12	7	22	0
3	7	13	7	23	7
4	0	14	8	24	0
5	0	15	15	25	0
6	0	16	9	26	0
7	0	17	8	27	0
8	0	18	0	28	9
9	0	19	0	29	14
10		20	0	30	21

Mean: 29 days=3.9.

c=New formation of a center of activity; E, on the eastern part of the sun's disk; W, on the western part; M, in the central circle zone.

## AEROLOGICAL OBSERVATIONS

[Aerological Division, D. M. Little, in charge]

By L. T. SAMUELS

Free-air temperatures during September averaged lowest over the northwestern section of the country and highest over southern California. (See table 1.) Departures from normal, at those stations with sufficiently long records, were small, and were negative at the lower levels and positive at the upper levels.

Free-air relative humidities averaged lowest over the middle and southern Pacific coast and highest over the

middle Atlantic coast, the difference being about 30 percent.

Resultant free-air wind directions over the eastern part of the country contained a greater southerly component than normal. (See table 2.) In most cases the resultant velocities were below normal in this region. Elsewhere resultant directions were close to normal, and velocities generally above normal.